

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(s):	Ahonen	CONF. NO.:	8277
SERIAL NO.:	09/954,602	ART UNIT:	2655
FILING DATE:	9/17/2001	EXAMINER:	Vo, Huyen X.
TITLE:	PROCESSING A SPEECH FRAME IN A RADIO SYSTEM		
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

This is in response to the Final Office Action mailed July 17, 2006 in regard to the above-identified patent application. A Notice of Appeal is being filed herewith together with a petition for a three-month extension of time.

It is respectfully submitted that a *prima facie* case of obviousness in the rejection of claims 1-3 and 6-10 over Wood et al. ("Wood") and Hallkvist et al. ("Hallkvist") under 35 U.S.C. §103(a) has not been established. The Examiner has failed to establish that the combination of Wood and Hallkvist expressly or inherently describes all of the elements of claims 1, 6-10, 12, 17-21, 23-24 and 29 and there is also no legal motivation to combine the references as required for purposes of 35 U.S.C. §103(a).

As set forth in MPEP §2142:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

It is further stated in MPEP §2142 that to “support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).”

The legal motivation to combine Wood and Hallkvist for purposes of 35 U.S.C. §103(a) is lacking. The Examiner states that Wood fails to disclose determining whether the frame contains speech that is decodable by a speech decoder by using only one speech parameter and not using channel codes. Hallkvist is presented for its teaching related to a Voice Activity Detector (VAD). Hallkvist discloses that the VAD is used to determine “whether an incoming signal contains speech information or not.” (Col. 4, lines 24-27.) Wood discloses bad frame detection in a communication system and describes a way to improve the detection of bad frames, i.e., BFI (Bad Frame Indicator). It would not be obvious to one of skill in the art to combine a VAD (Hallkvist) with a bad frame detection system (Wood) to achieve a system where “it is inferred only from the value of at least one speech parameter in the channel decoded speech frame and not from using channel codes, whether the speech frame contains speech that is decodable by means of a speech decoder” as is claimed by Applicant. Rather, it is submitted that the combination of Wood and Hallkvist is only capable of detecting whether the bad frame indication should be set and whether the frame contains speech or background noise.

The function of a VAD, as disclosed by Hallkvist, is to indicate whether a frame produced by the speech encoder contains speech or not. (Col. 4, lines 24-27.) In Wood, channel decoding and speech decoding are done normally, i.e., if the channel decoding in the channel decoder (reference numeral 202) is successful, it is considered that the speech frames contain decodable speech that may be decoded by the speech decoder (reference numeral 207). Speech frame substitution block (reference numeral 205) takes care of situations when a frame is lost. In Wood, the speech frame is considered always to be decodable by a speech decoder, if the "channel decoding" indicates that the frame is acceptable. This is not what is claimed by Applicant. Applicant claims inferring from the value of at least one "speech parameter" in the channel-decoded speech frame whether the speech frame contains speech that is decodable by means of a speech decoder. One of skill in the art will understand that "channel-codes" and "speech parameters" are different. A speech frame includes speech parameters and a speech frame is channel-coded. As claimed by Applicant, first the channel codes are checked. If the speech frame is free of defects on the basis of the channel-decoding, only then are the "speech parameters" examined to determine whether the speech frame contains speech that is decodable by means of a speech decoder. Wood does not disclose or suggest using only speech parameters and not channel codes as is claimed by Applicant. Thus, while one of skill in the art might add a VAD to Wood in order to detect whether the bad frame indication should be set and whether the frame contains speech or background noise, one would not be motivated to combine Wood with Hallkvist in order to achieve a system in which "it is inferred only from the value of at least one speech parameter in the channel decoded speech frame and not from using channel codes, whether the speech frame contains speech that is decodable by means of a speech decoder".

The Examiner states that the motivation to combine Wood with Hallkvist is because they are analogous art and are from the same field of endeavors. It is respectfully submitted that this is merely a conclusory statement and does not satisfy the need for "specificity" in a determination of obviousness. *In re Lee*, 277 F.3d 1338, 1342, 61

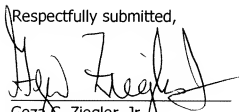
USPQ2d 1430, 1433 (Fed. Cir. 2002). Applicant respectfully submits that this reasoning might only being made with hindsight knowledge of Applicant's claimed invention. It is well settled that in order to establish a *prima facie* case of obviousness, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, without reference to the disclosure of this application. (MPEP Sec. 2142). For the reasons stated above, the proposed combination does not lead to what is claimed by Applicant, thus one would not be motivated to make the proposed combination. The Examiner has not identified any teaching or suggestion in either of the references that would lead one to make the proposed combination, or that the combination would result in what is claimed by Applicant. Thus, a *prima facie* case of obviousness under 35 U.S.C. §103(a) cannot be established.

Furthermore, the proposed combination does not teach each and every limitation recited by Applicant in the claims, as required by 35 U.S.C. §103(a). Claim 1 recites that if the speech frame is free of defects, "it is inferred only from the value of at least one speech parameter in the channel decoded speech frame and not from using channel codes, whether the speech frame contains speech that is decodable by means of a speech decoder." The combination of Wood and Hallkvist does not teach these features because Wood does not disclose or suggest, if the speech frame is free of defects based on the channel-decoding, determining whether the frame contains speech that is decodable by a speech decoder by using only at least one speech parameter and not from using channel codes", as stated by the Examiner, and Hallkvist only discloses the use of a VAD. While Hallkvist may disclose a VAD, that alone does not provide any teaching related to "determining whether the frame contains speech that is decodable by a speech decoder by using only at least one speech parameter and not from using channel codes." Thus, each element of the claims is not taught by the proposed combination of references.

The Examiner admits that Wood does not disclose or suggest this feature. (page 4, lines 1-6, OA mailed 07/17/2006). The Examiner also states that Hallkvist is "only

relied upon for the teaching of a VAD." As earlier noted, the disclosure of Hallkvist uses of a VAD to determine "whether an incoming signal contains speech information or not." (Col. 4, lines 24-27.) Nothing in Hallkvist discloses, "if the speech frame is free of defects", determining whether the frame contains speech that is decodable by a speech decoder by using only at least one speech parameter and not from using channel codes, as claimed by Applicant. The VAD disclosed by Hallkvist does not detect a defective speech frame, but considers it as either a frame with (background) noise with speech present, or a frame with noise without speech present. In Hallkvist, channel decoding or equalizing device marks the frames with background noise (Col. 5, lines 1-8). However, what Hallkvist does not disclose is that if the speech frame is "free of defects" it is inferred... whether the speech frame contains speech that is decodable by means of a speech decoder. Since Wood does not disclose at least this feature, the combination with Hallkvist does not remedy the deficiency. Thus, the combination cannot disclose or suggest each and every feature of Applicant's claims, and a *prima facie* case of obviousness is not and cannot be established.

In summary, a *prima facie* case of obviousness has not been established as there is no "legal" motivation to combine references as required, the proposed combination does not lead the what is claimed by Applicant, and each and every feature recited in the claims is not disclosed or suggested by the proposed combination.

Respectfully submitted,

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